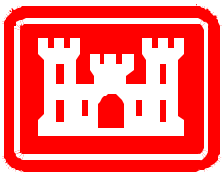
U.S. Army Corps of Engineers



Guidance and Definitions

For

The Information Technology Investment Portfolio System

Office of the Deputy Chief of Staff
For Corporate Information

16 October 2002

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for
The Information Technology Investment Portfolio System

I. **General Guidance**.

a. Commanders and Directors of Major Subordinate Commands, Districts, Centers, Laboratories, and Field Operating Activities, as well as the Headquarters staff, are required to develop and produce an Information Technology Investment Portfolio of their IT investments.
The Information Technology Investment Portfolio System (ITIPS) will be used to enter/update, review, and validate IT investments acquired and used by their organization. All IT must be approved by the applicable committee(s) as a part of the Information Technology Investment Management Process.

b. ITIPS is the **sole official repository** of IT information used to support a variety of IT decision-making processes. These include:

1. The formulation of the IT portfolio which is ranked by the Capital Planning and Investment Control (CPIC) component of the ITIM Process and then provided to the Budget Process for funding decisions (PRIP, Fee-For-Service, Operating, and Program Budgets)

2. Input to the Command Consolidated Guidance and Command Management Reviews

3. Development of the DA Program Objective Memorandum; Office of Management and Budget Civil Works submissions

4. Used to report the Civil Works Automation Budget to Congress.

It is **critically important** that ITIPS information is complete and accurate so that **your** actual requirements are reflected and supported.

c. All IT acquired and maintained by USACE activities, regardless of costs, as defined in paragraph VI below, must be entered and kept current in ITIPS. This includes IT for all Corps functional areas, including business, scientific, research and development, technical, administrative, and engineering applications (e.g., CADD and GIS applications). The only exceptions are as follows:

1. Systems being developed or maintained or IT being acquired on a reimbursable basis for the sole use of customers outside of the Corps.

2. Systems developed as an integral part of internal research and development (R&D) projects, when the system is not targeted for a production environment.

d. All IT initiatives will be entered into the ITIPS under the appropriate IT classification IAW paragraph VI below.

e. Directors/Chiefs of Information Management will ensure that local committee(s) approval has been obtained prior to initiating the acquisition process. The ITIPS record number must be placed on all procurement documents for all IT products and services. See paragraph II for entering ITIPS numbers on PR&Cs in CEFMS.

f. Directors/Chiefs of Information Management will maintain a record copy of the local committee(s) approved portfolio initiatives indicating which initiatives are approved for funding and the amount of the approved funds. ITIPS portfolio report *Approved Portfolio for a Fiscal Year* will be used to list requested and approved amounts for each initiative.

g. Standard Information Technology Resource Codes for use in recording IT acquisitions in CEFMS are listed in Paragraph X. All IT related acquisitions not using one of the Standard IT Resource codes will be disapproved by the Technical Approver and returned to the requesting activity for the appropriate resource code.

h. The Commander or Director will ensure that the LCMIS approval thresholds and requirements of AR 70-1 and ER 25-1-2 are being met, as applicable.

II. **Additional Guidance/Instructions**.

a. **Personnel Costs**. In-house personnel and contract support costs will be included for initial development and operation and support costs, as appropriate. End user costs **are not** included.

b. **Benefits/Risks.** For corporate, Corps-wide investments, you must describe the benefits and business and/or technical risks in the Tangible and Intangible Tabs as they contribute to the USACE business/goals and customer needs/requirements. Specifically, provide the following:

1. A quantitative and qualitative description of **how** the investment will contribute to the customer requirements/needs; e.g., stakeholder benefits, systems savings, or cost avoidance (place in the Tangible Tab);

2. A quantitative and qualitative description of the **impacts (risk**) to the customers' needs/requirements, if the requirements are either partially funded or not funded (place in the Tangible Tab);

3. Qualitative descriptions of the investment's increased values to **other** organizations' business missions/goals and customer needs/requirements, e.g., other USACE, Army, DoD, and other Federal, State and local governments. (Place in the Intangible Tab).

c. **IT Investment Justification**. Enter in the *Future Tab* the **justifications for each** budget year, which thoroughly describe the budget requirements as entered in the Budget Tab. The justification must describe development costs (program and enhancements costs, as applicable) and O&S costs for

each FY (see para VII - Cost Definitions, b and c for Development and O&S cost definitions).

d. **LCMIS**. As a minimum, include all pertinent LCMIS information (phase, etc.) in the *LCMIS Tab* for all applicable systems.

e. **Life Expectancy Field.** The *Life Expectancy* field is defaulted to **8 years** for new IT initiatives for planning purposes. However, additional years can be added for determining total life cycle costs if required. This field provides the number of years that the initiative is expected to be in service and determines the number of out years on the Budget Tab(s). It is limited to a total of 15 years (including the deployment year). Contact members of CECI-TA for requirements to extend the life beyond this period. See paragraph m.2. for additional guidance on the Life Expectancy field.

f. **Budget Cycle – Approved, Requested, and Planned.** Enter the dollar amounts as follows:

1. **Approved represents the Current Year (FY03)** – Enter the dollar amounts approved by the senior level committees, e.g., Senior Programming Budget Advisory Committee (SrPBAC);

2. **Requested represents the Budget Year (FY04)** – Enter the dollar amounts for the final budget requirements.

3. **Planned represents the Budget Year plus 1 (FY05) –** Enter the dollar amounts for the planned requirements. Additional planning for **Budget Years plus 2 through 5 (FY 06 through FY 09)** are entered via the **Out Years Tab.**

g. **Prior Years**. The amounts previously indicated (prior to the "roll") for the *Approved* budget are now reflected in the *Prior Years* screens/fields. Prior Years amounts are reflected as aggregated amounts and can only be adjusted by personnel in the Information Architecture Branch (CECI-TA), Directorate of Corporate Information. If you need to adjust the budget dollar amounts displayed in the Prior Years columns, send a request to CECI-TA with the amounts to be changed, the Civil Military split (percentage) for the funds, and the reason the change is necessary (e.g., doesn't reflect the approved budget).

h. **Funding Methods/Cost Categories.** ITIPS contains the capability to record how funds are appropriated for use on an IT initiative. These are identified as *Funding Methods* and include: *Direct Funds, Fee for Service funding (Metered or Site License), or PRIP funding*. See paragraph VIII for definitions of *Funding Methods*. Within each funding method Budget and planned expenditures are broken into individual cost categories as follows: Civilian Pay, Travel, Equipment Purchase, Equipment Lease, Communications, Supplies, Equipment Maintenance, Software Purchase, Software Lease, Computer Processing Services, Training, Other, PRIP Pay Back, and Contract Support. Note: Initiatives classified under IT Classification "Support to Command Standard Systems" contain an additional cost category, *Fee for Service*. Definitions for each of the cost categories are contained in paragraph IX.

i. **Asset Details**. Cost information can either be entered at the Budget Tab level or via the supporting Asset Tabs. The Asset Tab provides the capability for more details about the IT investment. For example, IT equipment could be further defined to indicate personal computers, or Sun microprocessor, as well as specify the number and costs for these assets.

j. **Budget Approval.** IT investments that have been approved by the local approving committee(s) must be entered into ITIPS via the *Budget Approval* option appearing in the menu bar at the top of the ITIPS screen. The total amount approved/authorized by the local approving committee(s) for each initiative will then be reflected in the field labeled *Approved* on the Management Tab. This reflects the maximum amount authorized for expenditure for each initiative. Access to this field is limited to and is controlled by the local approving committee(s) (see paragraph IIk below). Note: If the *Budget* amount on the *Management Tab* for the current year appears in red with a message stating, "Red indicates out of sync with budget tab", you need to adjust the amounts in the *Budget Tab(s)* to match the *approved* amount. ITIPS help contains detailed information for this topic under the "How to..." section.

k. **Budget Approval Authorization.** Access to the Budget Approval capability is limited to only those authorized as noted in paragraph IIj above. In order to activate the capability, provide the name, office symbol, and user-id of the individual(s) who will be performing this function for your organization. This information should be provided, via e-mail, to William W. Sevila or Johnnie M. Carter.

l. **Information Assurance.** This tab is used to enter Accreditation Data for Automated Information Systems and Networks. The Information will be used to access accreditation status across the Corps and to help manage the Accreditation Process in compliance with AR380-19 and DITSCAP (DOD Information Technology Security Certification and Accreditation Process). You will be able to enter the type of accreditation - Authority to Operate (ATO), Interim Authority to Operate (IATO) or none, and the Designated Approving Authority (DAA), Information Assurance Manager (IAM), Information Assurance Officer (IAO) and Systems Administrator (SA) for each AIS and Network.

m. **Data Errors**. It is becoming more and more critical that the data in ITIPS be as accurate and complete as possible as we become more and more reliant on this data for responding to the increasing information demands, e.g., Civil Works Budget, Office of Management and Budget, and Program Objective Memorandum submissions, justifications of PRIP requirements, the ITIM/CPIC process, etc. Some examples of these are:

1. **Misuse of the IT Classification, "*Support to Standard Systems*"**. A Command/Corporate AIS initiative; *i.e.*, PROMIS, CEFMS, REMIS, etc., that has been created as a "Local *AIS"* should be classified as ***"Support to Standard Systems".***

2. **Life Expectancy** - Life expectancy field not entered/updated or too many years are indicated, e.g., 30 years.

3. **Breadth Codes** - Incorrect or missing breadth codes used, e.g., local initiative indicating a

breadth code of B-4 or higher which indicates Corps-wide.

4. **Various Tabs** - missing or incomplete information on tabs such as LCMIS, Systems Description, Component Characteristics (business process, intended users, and particularly System Security), etc;

5. **Archiving Old Initiatives** – Not indicating initiatives that should be archived.

6. **Budget Tabs**

-- Dollars should be entered in thousands.

-- Percentage splits or fund codes missing for budget amounts.

-- Outyears budget information missing.

-- Not reconciling the Planned Year after a roll.

-- Wrong cost category when using assets with the PRIP tab i.e., entering dollars in Ops and Spt

n. ITIPS online Help, as well as members of the Information Architecture Branch, Directorate of Corporate Information can be consulted regarding the accuracy or appropriateness of the information being entered into ITIPS.

III. **Linking IT Investments to Obligations**. This section contains instructions for using the PR&C screens in CEFMS to link an organization's IT obligations to its IT investments in ITIPS. All IT related acquisitions entered into CEFMS must contain at least an ITIPS number and optionally an asset number and be approved for acquisition as follows:

a. **ITIPS Number.**

1. IT related acquisitions: When preparing a PR&C to acquire IT related assets (equipment, software, contract services, etc) the ITIPS number must be entered on Purchase Request Line Item Create/Update" Screen 2.36. This is a required field. The ITIPS number consists of 8 characters – 3 alphas and 5 numeric. Use the ITIPS number in ITIPS that was approved for the IT being acquired.

2. Non-IT related acquisitions: Enter NA in this field and proceed to the next field. Note: Use of Corps-wide standard IT resource codes (e.g., ITEQUIP) will automatically require that an ITIPS number be entered.

3. Non-Corps IT Acquisitions. Use the universal ITIPS number XXX00000 format for IT acquisitions that must be made through CEFMS but should not be tracked back to the organization's

ITIPS records. Note - the format must consist of 3 alpha and 5 numerical characters. The alpha portion will consist of the characters assigned by ITIPS to that organization's ITIPS numbers, e.g., NAB for Baltimore District, SAC for Charleston District, etc. The numerical portion will always be "00000". This format must be followed in order to prevent these records from being negatively reported against the organizations CMR rating criteria.

b. **ASSET ID**. This is an optional field and is only required if ITIPS records have been recorded down to the asset level. See paragraph 1g. above.

c. **Technical Approval**. All IT related purchases are required to be reviewed to determine whether or not they are recorded in ITIPS and authorized for acquisition. The technical reviewer can view the ITIPS number assigned to the PR&C by going to the Purchase Request Technical Approval Screen 7.47 and pressing Control F1. This brings up screen 9.0 where the ITIPS number will be displayed. As a minimum, it is recommended that the Technical Reviewer use the ITIPS report Approved *IT Portfolio for a Fiscal Year* to determine whether or not the ITIPS number cited on the PR&C is valid and correct. If it is not the correct ITIPS number, the PR&C should be disapproved and sent back to the requester for the correct ITIPS number. The PR&C should also be checked for use of the appropriate Standard IT Resource Code(s) as listed at paragraphs X and X.

d. **Reimbursables Within the Corps:** If you are using another Corps organization to acquire IT you must furnish them with the applicable ITIPS number to which cost will be recorded. If you are acquiring IT for another Corps organization you will need the ITIPS number that applies to their IT investment.

IV**. Enhancements/Features recently included in ITIPS.** This section highlights changes/modifications contained in the **current and previous release** of ITIPS.

a. **Initiative Ownership.**

1. An initiative (ITIPS record) is "owned" by the user/user id that created the initiative. The ownership of a particular record can be determined by either viewing the *User Access* screen or running the *Initiative Status* report for that initiative or the organization. The Status report will also provide a list of users who have been granted access to an initiative.

2. An owner of an ITIPS record can transfer ownership to another registered ITIPS user via the *User Access* menu. The *User Access* menu also gives the Owner/POC of the ITIPS record the ability to grant access privileges to other ITIPS users. For example the Owner/POC of a headquarters record e.g., REMIS could grant ownership and/or update access to a user at a District or other field organization and vice versa.

3. The Owner/POC can grant one of the following privileges to another ITIPS user:

Full Update - grants full update privileges allowing the user to modify or update

any data element.

View Budget - grants view budget access which allows the user to view but not modify or update the budget.

Owner/POC - transfers ownership to another ITIPS user.

b. **Change Record Selection.** There are 5 options the user can choose for viewing or updating records. The following choices are available:

Only the records I can update or view - Selects only the records the user is the owner of or has been granted update and/or view permission. The user has the option to include all IT records within their organization.

Records By IT number - Enables the user to select for specific record number or a range of numbers if a wild card character (e.g., %, ?) is used in conjunction with the number.

Records for an organization - Selects records for a specific organization. When selecting a Division the user has the option to include all Districts IT records within that Division.

Headquarters only - Selects records for headquarters only.

All records - Permits the user to view all ITIPS records in the database.

c. **Reports.** The following reports have been recently enhanced or added:

Initiative - Status Report lists the "owner" of an ITIPS record and the users granted access to that record. Information includes level of access, i.e., update/write privileges and contact information such as office symbol and phone number.

*Obligations - Summary by IT Initiative and Resource Code Report i*ncluded. This report summarizes obligations dollars by resource code for an initiative.

Obligations - Obligations Detail Report (formerly named Line Item Detail) revised to include the PR&C Number and Amendment Description.

Obligations - CEFMS Obligations By Non Matching IT Number Report added. Includes those PR&Cs that contain IT numbers/records not existing in the ITIPS database. This report is also contained in the CMR Reports.

CMR - CMR Status Report and *CEFMS Obligations By Non Matching IT Number Report* added. These reports support the organizations' status in meeting the Command Management Review performance indicator for improving the IT Capital Planning Process. The CMR indicator determines the percentage of matched obligations i.e., those containing PR&Cs with valid ITIPS numbers contained in the ITIPS database.

V. **Information Technology Definitions.** The following definitions are used as the basis for determining what data will be recorded in ITIPS for the purpose of planning, budgeting, and tracking Information Technology (IT).

a. Information Technology (IT)(from 40 U.S.C. 1401(3)).

1. The term 'information technology', with respect to an Executive Agency means any equipment or interconnected system or subsystem of equipment, which is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the Executive Agency. For purposes of the preceding sentence, equipment is used by an Executive Agency if the equipment is used by the Executive Agency directly or is used by a contractor under a contract with the Executive Agency which (1) requires the use of such equipment, or (2) requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product.

2 Information technology includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources.

3 Notwithstanding paragraphs V. a. 1 and V. a. 2, the term 'information technology' does not include any equipment that is acquired by a Federal contractor incidental to a Federal contract.

Note: Information Technology includes telecommunications and communications equipment and national security systems (NSS).

b. Automated Information System (AIS) (from DODD 5000.1 DEFINITIONS 3.4. Automated Information System (AIS) - A combination of computer hardware and software, data, or telecommunications that performs functions such as collecting, processing, transmitting, and displaying information. Excluded are computer resources, both hardware and software, that are: physically part of, dedicated to, or essential in real time to the mission performance of weapon systems.

c. Information Technology Classifications - IT Classifications will be used to expand on the above definitions and to facilitate the reporting and tracking of IT costs in USACE. The IT Classifications listed in paragraph VI below indicate the primary focus areas for the purpose of entering and tracking IT information and costs in the ITIPS. The list is not all-inclusive and will in all likelihood be expanded and/or modified over time.

VI**. Information Technology Classifications**

a. **AIS**: Any application software using COTS or custom developed code to satisfy the information requirement needs of a business process and/or program. Includes hardware and communications specifically required for using the software (see DoD definition above). The AIS

functional proponent (FP), project manager (PM), or other individuals as designated by the FP, are responsible for entering this information.

b. **Programs**: Consist of the following:

1. **Internet Center of Expertise**. For use by Headquarters only. See Internet under Infrastructure for local investments associated with the internet support.

2. **E-mail mail Center of Expertise**. This classification is for use by the USACE E-mail Center of Expertise.

3. **Defense Message System**. The Defense Message System is a DoD e-mail system, which replaces the Automatic Digital Network (AUTODIN) message system and other proprietary e-mail systems. The system uses enhanced Commercial Off the Shelf e-mail products to provide secure writer to reader service. DMS is designed to provide the reliability, availability, and maintainability required to support critical command and control messaging and to protect sensitive information.

4. **Information Management Programs**. Program areas under Information Management that do not specifically involve automation but require planning, budgeting, and tracking the costs of these areas. Examples of this classification are USACE Library Program and Architecture 2000.

c.. **Information Technology Infrastructure**. The underlying technological components that compose an organization's system architecture. The Information Technology Infrastructure consists of the following sub classes:

1. **Office Automation**. The USACE working definition of Office Automation is: The use of computer systems and communications technology to perform general, every day tasks such as document management, electronic mail, archiving and retrieval of text/graphics groups. The operation of systems in which a machine interface is required for the user to create, work with, display or delete records within a general office environment. Office Automation embodies a core group of functionality consisting of word processing, spreadsheet, presentation, office database, electronic forms, calendar/scheduler, electronic mail, web browser and operating systems used to support day-to-day office operations. These generic software tools are used for general office functions not specific to any Business Area. LANS/WANS used only for communications are reported under the classification for LAN. ITIPS information for this classification will be consolidated for and entered by each Division, District, Center, Laboratory, Field Operating Activity, and Headquarters Directorate/Separate Office. The ITIPS fields: Start Up year; Deployment year; Life Expectancy - 5 yrs; Program Strategy - other; Mandated - No; Archive - No; and Life Cycle Phase - IV are defaulted and cannot be updated for this classification. The HQUSACE POC for Office Automation is Mr. Chester Walker, CECI-TA, (202)761-7690.

2. **Local Area Network**. A data communications system that lies within a limited spatial area (such as in rooms, buildings, vehicles, watercraft, aircraft, and campuses). Has a specific user group

and specific topology. Not a public switched telecommunications network, but may be connected to one. Connects many communicating devices (such as, computers, terminals, and printers and mass storage units) and use gateways or communications servers to connect with other hosts. Federal, military and most USACE activities use the Ethernet and IEEE 802.3 Standard. This standard describes a LAN as a collection of devices on the network that all see the same network traffic. These standards provide the cable specifications, signal characteristics, and topology rules that make the LAN a functioning data communications system. By these standards, devices on the network can communicate with each other without going through a router or remote bridge (no wide area network - WAN links). Hardware and Software include nodes [to include addressable networked computers (servers and workstations), peripherals, printers, hubs, bridges, and routers], cabling, wiring cross connect closets and connectors, network interface cards, PCMCIA card slots (DoD requirement), Network management systems, modems and subnets. Hardware and software acquired for LAN communication use and not reportable under Office Automation must be reported under this category. Contractor personnel costs should also be included in LAN operating costs, as applicable. ITIPS information for this classification will be consolidated for and entered by each Division, District, Center, Laboratory, Field Operating Activity, and Headquarters Directorate/Separate Office. The ITIPS fields: Start Up yr; Deployment year; Life Expectancy - 5 yrs; Program Strategy - other; Mandated - No; Archive - No; and Life Cycle Phase - IV are defaulted and cannot be updated for this classification. The HQUSACE POC for LAN is Mr. Kerry Khan, CECI-TA, (202)761-8828.

3. **Corps of Engineers Enterprise Infrastructure Services**. The Corps of Engineers Enterprise Information System (CEEIS) is the USACE IT Infrastructure, which is primarily comprised of a communications backbone, hardware, software, operating systems, network, security and database components. CEEIS includes the processing centers located at the Engineer Research & Development Center, Information Technology Laboratory, Vicksburg, MS and the Northwestern Division, Portland, OR, as well as the USACE worldwide data communications network. **The recording of costs for this classification is for the use of the CEEIS Program Manager only.**

4. **Voice Communications**. Local communication requirements that are not included in CEEIS such as FTS 2001, PBX, voice Telephone, cell phones, pagers, and radios.

5. **Data Communications**. Local communication requirements that is not included in CEEIS such as FTS2001 or other circuits (T1 lines, frame relays, etc).

Peggy B. Wright, ERDC-ITL-MS, (601) 634-4630 for additional information regarding CEEIS, voice and data communications

6. **Internet** – The loosely connected worldwide collection of computer systems that use a common set of communications standards to send and receive electronic information.
The detailed cost guidance provided is to be associated only with the World Wide Web (WWW) aspects of the Internet. For information related to other aspects of the Internet (e.g., e-mail, FTP (file transfer protocol), communications, etc.) see the appropriate points of contact. Following are costs to be associated with the WWW of the Internet: (a) web-related contractor services; (b) server-side

hardware dedicated to Internet use; and (c) software and/or tools, such as web authoring, web monitoring, web analysis, web programming, and web applications.
It is important to note that all Internet costs reported under this classification will indicate the funding type as well as the initial development and annual operational costs associated with the program, project, system, web site, home page, web page set, web application, web software and/or web server. The HQUSACE POC for the WWW aspects of the Internet is Mr. Michael Henderson, CECI-TA, (202) 761-0468.

7. **General Purpose Data Processing**. Non-CEEIS, general purpose, data processing hardware procured through any type of contract and represents hardware which a Major Subordinate Command/District, Laboratory, or Field Operating Activity must individually resource. Hardware acquired through the central CEEIS program funding is not included in this classification.. Data processing hardware acquired in conjunction with a specific Automated Information System (AIS) will be reported as part of that AIS.

8. **Facilities Modernization**. Any upgrade, repair, enhancement, or development of a facility that requires acquisition of Information Technology assets, and/or the IM required support. For example, communications network cabling and wiring for the construction or relocation of a physical facility or visual information equipment to create a new video teleconferencing facility. Not included in this classification are costs for physical furnishings such as furniture, actual construction costs associated with the facility, or costs for embedded processors, such as those associated with HVAC units, lighting, or security systems.

9. **Technology Integration**. Requirements in this classification should be limited to initiatives which use integrated IT technologies to solve a specific information management deficiency. This classification should not be used as a "catch all" for identifying Information technologies that do not relate to a common information deficiency. Examples include development/support of an Emergency Operations Center (EOC), IT support required for specific development/support of a Learning Resource Center (LRC), IT support for disaster/contingency/mobilization planning.

d. **Automated Engineering Tools** (used in planning, engineering, operations/maintenance, construction, and real estate -- not just engineering). NOTE: The inclusion of hardware in some of these items is questionable. Now that many of these automated engineering tools can run on new pentium desktop computers, the hardware can have multiple uses from engineering tasks to general office automation. Only the items that normally utilize dedicated hardware today have hardware included in the definition.

1. **Computer Aided Design and Drafting** (CADD) – COTS that enables engineers and architects to develop designs and associated graphics, including such items as 3 dimensional models and views at any angle and any level of zoom, as well as tracking design dependencies, and automatically changing dependent values when one value is changed.

2. **Numerical Models** (NM) - Corps developed software to perform various engineering

calculations ranging from surveying coordinate conversion to coastal engineering analysis, which may be or may not be able to transfer results directly into CADD/GIS systems.

3. **Computer Aided Engineering** (CAE) - Corps/commercially developed software used to perform various engineering calculations, such as structural, electrical and mechanical design, which may be or may not be able to transfer results directly into CADD systems.

4. **Electronic Bid Solicitations** (EBS) - A standard process for converting all bid solicitation documents into a read-only CD-ROM and/or web page for submission to construction contractors interested in submitting a bid. Documents and viewing software are recorded on CD-ROM's for distribution. The Portable Document Format (PDF) is used for text files and (Continuous acquisition Life-Cycle Support) CALS is used for drawing files.

5. **Geographical Information System** (GIS) - COTS hardware & software used for mapping and analyzing things that exist and events that happen on Earth. GIS technology integrates common database operations such as query and statistical analysis with the unique visualization and geographic analysis benefits offered by maps. These abilities distinguish GIS from other information system and make it valuable to a wide range of public and private enterprises for explaining events, predicting outcomes, and planning strategies.

6. **Remote Sensing/Image Processing** (RS/IP) - COTS hardware & software that process or analyzes remotely sensed (without physical contact) information from various spectra and platforms. Includes photographic and digital imagery from acoustic, microwave, radar, infrared, and visible spectra sensing devices, plus related image/data processing software used to analyze and transform the data for use by other systems, such as CADD/GIS.

7. **Global Positioning Systems** (GPS) - COTS hardware software that receives, process and display geographic positional data from the GPS constellation of satellites. Differential GPS uses a local correction to improve the accuracy for engineering and other surveying and mapping purposes.

8. **Automated Hydrographic Surveying Systems** (AHSS) COTS hardware & software that acquire, process and display hydrographic/bathymetric survey data. Used for surveys for charting, engineering, inspection, condition updates, geotechnical investigations, etc. These systems also can use the data to compute dredge volumes, monitor bottom changes, etc., and transform the data for use by other systems, such as CADD/GIS.

9. **Automated Topographic Surveying Systems** (ATSS) COTS hardware & software that acquires, displays, and logs field survey data from electronic total stations or similar electronic distance or angular measurement devices: as used for topographic mapping, site plan creation, construction layout, boundary/real estate surveying, etc. Also includes office hardware/software to reduce and/or translate electronically collected field data, or digitizing manually collected field data and to transform the data for use by other systems, such as CADD/GIS.

10. **Photogrammetric Mapping Systems** (PMS) - COTS hardware & software that acquire, reduce, adjust, translate, or stereoscopically mensurate photographic images into digital

data files for use by other systems, such as CADD/GIS. Includes aerial mapping, cameras/systems, automated stereoplotter systems, soft copy Photogrammetry devices, etc.

11. **Automated Map & Chart Production** (AM/CP) - COTS hardware & software, normally a specialized use of CADD/GIS technology to automatically create and update maps and charts for a variety of users from engineers to mariners.

12. **Electronic Navigation Charts** (ENC) - COTS hardware & software used for marine navigation purposes normally composed of a positioning system, such as GPS, and an electronic chart database, which enables the mariner to trace his position in real-time on a computer based chart.

13. **Computer Aided Facilities Management** (CAFM) - COTS hardware & software that utilizes various forms of CADD/GIS technology to capture, store and manipulate data required to manage the assets of any facility, from a single building (inside and outside) to the multiple buildings and infrastructure of an entire base or installation. Typical functions include asset tracking, CAD integration, space management, maintenance scheduling and tracking, hazardous materials tracking, and employee workflow and tracking which forms the basis of an integrated facility information system that helps control operating costs, eliminate redundancy and establish intelligent control over assets.

14. **Process Control**. Includes Data Acquisition and Control System/Supervisory Control and Data Acquisition (DACS/SCADA). This is described as - A system that provides equipment control and monitoring from another location through data transferred digitally. Most systems also contain real time control loops and have time critical programming related to external equipment and operator needs.

The HQUSACE POC for Automated Engineering Tools is Mr. M.K. Miles, CECW-EE, (202) 761-5532.

e. **Support to Standard Systems:** This classification is for local planning, budgeting, and tracking costs in support of USACE Corporate, Army, and DoD Standard Systems, e.g., Corps of Engineers Financial Management System, Program and Project Management Information System, Standard Procurement System, etc. A pull down list is provided in ITIPS for selecting the appropriate system. Use classification "Other IT" if the standard system for which you want to record costs is not listed. Costs previously recorded under other classifications (e.g., AIS) should be reclassified under the appropriate Standard System listed in this classification.

f. **Records Management Modernization:** Plans, policies, and programs that provide efficient and systematic life cycle management of all recorded information, regardless of media. Examples are: document imagining systems; electronic document management systems; automation of records holding area functions; electronic filing/record keeping systems; automated and manual paper filing/ retrieval

systems/equipment; upgraded postage metering equipment; support services for records management such as contracting out mail room and

records holding areas. The HQUSACE POC for Records Management is Linda Genovese, CECI-TR, 202-761-7672.

g. **Visual Information Support:** The capture, manipulation and storage, and dissemination of various visual media, with or without sound. Also includes desktop publishing. Examples are: Video Communications; High-End Presentation Graphics; Laser Disc Photographic Cataloging System; Visual Information Job Tracking System; Business Graphics; Conference Support; Portable Document Format; and Digital Visual Library. The HQUSACE POC for Visual Information is Mr. Dan Troyan, CECI-TR, (202) 761-7699.

h. **Library Modernization:** Library modernization includes the automated systems and communications requirements that support the USACE Library Program in its mission of accessing, acquiring, organizing, and retrieving information needed by the Corps of Engineers. This modernization covers the USACE Library Program and the Library activities at each subordinate command organization. The following are included in USACE Library modernization efforts: (1) The automation of library functions such as the Library catalog, acquisitions, serials control, circulation, content management, and web-based resource development. It also includes automated Union Lists of corporate holdings and digital media archives. (2) Electronic technologies such as internet/intranet based and CD-ROM technologies that enhance or replace information resources formerly available in hard copy only (books, periodicals, specifications, regulations, etc.). (3) Electronic databases which are maintained or accessed by the Library, and (4) The redesign and modification of library facilities The HQUSACE POC for Library Modernization is Carol McMillin, ERDC-ITL-MS, (601) 634-4120.

i. **Printing and Publication Modernization:** Modernization requirements in support of large scale printing and publishing; and requirements for small and medium scale copiers. Includes activities involved with the layout, camera-ready activities, printing, assembly, binding and distribution of all printed media. This includes the use of Government and commercial Printing and Publishing activities. The HQUSACE POC for Printing and Publications is Mrs. Marlene Roberson, CECI-TR, (202) 761-5973

j. Information Assurance. USACE must not only ensure the "confidentiality" aspect of our information systems but must also address the overarching concept of Information Assurance. This includes not only confidentiality of information, but also the integrity of the database from which it" drawn, the availability of the infrastructure to deliver the message and our ability to identify and authenticate those who are using our networks. The FY01 Defense Authorization Act requires the adoption of risk management practices to ensure adequate information assurance against the escalating threats to USACE systems. Public Key Infrastructure (PKI) is the DOD-mandated standard to provide critical technology to protect information vital to warfighter and business operations. In addition to meeting these requirements, USACE must take corrective actions to improve information assurance and eliminate security vulnerabilities that have been identified across the Corps. These costs are to

include all hardware, software, contract and any other costs associated with the Information

Assurance activities. The HQUSACE POC for Information Assurance is Mr. Tom J. Aubin, CEIM-TA, (202) 761-8723.

k. **Other IT**: For Major IT initiatives that are not covered above, contact CECI-TA, Ward Sevila, 761-7700. **(This IT Classification is gradually being phased out).**

VII**. Cost Definitions**. The following definitions may be helpful when inputting planning and budget data on the ITIPS *Budget Tabs*:

a. **Life Cycle Costs** (LCC): Includes all costs incurred throughout the AIS life cycle, including the operations and maintenance phases. The costs include design, development, deployment, operations, maintenance, personnel (both government & contract), telecommunications, facilities, equipment, training, documentation, acquisition, site activation,
test & evaluation, parallel operations, and approval process costs over the entire life of the automated information system.

b. **Development Costs**. The following are the two types of development costs:

1. **Program Costs**: Includes all costs (all types of funding) incurred from the time a requirement for a system is identified through completion of deployment to each operational site. Elements of expense for program costs can include: personnel salaries (project management and material developer staff, both government & contractor, for the design, development, test & evaluation, parallel operations, and deployment), travel, initial training, hardware (required to develop or operate the AIS), software (non-development: i.e., COTS), telecommunications (equipment and/or services necessary for AIS project development; i.e., purchase of LAN), facilities, acquisition, contract services, leases, supplies, and site preparation.

2. **Enhancement Costs**: These are costs associated with enhancing /modifying a system beyond its initial/existing specifications. Failure to fund these enhancements and modifications **do not** render the existing system inoperable, hence one can relate to them as "optional" funding costs. Developmental efforts should not be interpreted as **non-essential or** trivial. These costs can be associated within the same categories as noted in the O&S description. Development of additional capabilities or system enhancements can result or have a corresponding impact on future O&S costs.

c. **Operations and Support**: These are the **minimum** costs needed to maintain a system operational within its **initial/existing** specifications. Failure to fund these costs would render the system inoperable hence, one can relate to them as "non-optional" funding costs. These costs include as a minimum:

1. **Labor**
   - Project Management team (Gov't and Non-Gov't)
   - Technical team (Gov't and Non-Gov't)

2. Facilities leasing

3. Hardware replacements

4. Software licensing fees

5. Communications lines

6.. Travel

7. Sustainment Software Engineering Costs (examples: work associated with maintaining existing interface agreements; repairing or analyzing unexpected "bug", resolving audit findings; administering a configuration control board)

Sample Scenarios:

-- A system has within its 150-component architecture two physical database servers and one application server, which need replacement. **These are O&M costs….*Why??* …** because they are only three components of an entire system; and not replacing the entire system.

-- A system has to develop a new interface to another system. The costs associated with developing this **new** interface are developmental in nature. The costs associated with maintaining this new interface in the future becomes an O&M cost.

VIII**. Funding Methods** - The means by which funds are appropriated for use on an IT. The Funding Methods are:

a. **Direct Funds**. Funds appropriated by Congress to accomplish a specific purpose. Direct funds are distributed by means of a Funding Authorization Document (FAD).

b. **Metered**. A charge to a user of a system based on actual measured usage. The charge for the session consists of a rate to cover costs to use the processing resources plus the individual Information Technology System's rate developed by CERM-B. The rate for use of the processing resources is developed either corporately for USACE wide applications (CEAP based), regionally for Divisions (MSC), or locally for District/Lab systems. The Information Technology System rate is developed based upon the total IT operation and maintenance costs divided by the expected processing resources to be used during the year.

c. **Site License**. A "subscription fee", a one-time annual flat charge and calculated by the Functional Proponent (FP) by dividing the total annual cost of an Information Technology System by the number of subscribers. Who or what is a subscriber is defined by the FP, but it will be a fixed number, such as number of districts, number of users, mummer of project offices, construction placement,

estimated amount of work to be performed, etc. A portion of the charge

can be a variable as well as fixed. The FP is to provide CERM-B a detailed explanation of the method to change the field. Outside agency users will be included in the calculations.

d. **Plant Replacement and Improvement Program (PRIP)**. PRIP is a self-sustaining capital acquisition program residing within the Corps of Engineers' Revolving Fund. It was established with the passage of Public Law 83-153 in 1953. PRIP is a program utilized by the Corps for the procurement of all classes of personal and real property and equipment with an estimated unit or system cost of $25,000.00 or more, an economic/useful life or two or more years and used in support of more than one Civil Works project. Such purchase shall not be acquired through the use of overhead accounts, project funds, or a combination of other funding mechanisms to avoid use of the PRIP. The Revolving Fund shall be reimbursed for all capital acquisitions acquired through PRIP. The reimbursement can be in the form of user/customer charges that will include depreciation, plant increment (adjustment for inflation cost of a future replacement, and insurance (PRIP acquisitions are self-insured). The Revolving Fund may also be reimbursed with the sale of surplus property. The primary purpose of all PRIP acquisitions is for the support of the CIVIL Works mission. Such acquisitions may be used to support the Military program, other Governmental agencies, states, municipalities, individuals, or corporations outside the Federal Government when not otherwise in use provided that proper usage charges are paid by the activity being supported. The regulatory guidance for this program can be found in ER 1125-2-301 and ER 37-1-10.

IX. **Cost Category Definitions for ITIPS Budget Tabs**.

a. **Civilian Pay**: Gross compensation as applicable to the related Information Technology (IT) for personal services rendered to the Government by Federal civilian employees (Total Full Time Permanent Military and Civilian Funded Pay). Also included are total full time permanent civilian benefits.

b. **Travel**: Obligations as applicable to the related IT for transportation of government employees or others, their per diem allowances while in an authorized travel status, and other expenses incident to travel that are to be paid by the government either directly or by reimbursing the traveler. Consists of both travel away from official stations, subject to regulations governing civilian and military travel, and local travel and transportation of persons in and around the official station of an employee. (i.e. TDY, PCS, installation/station travel).

c. **Equipment:** Any personal property or interconnected system or subsystem of equipment used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information.

1. **Purchases:** Investments made for the procurement of IT personal property.

(a) **Purchases >$25K:** Capital investments for personal property/equipment for data

processing, such as supercomputers, mainframes, mini-computers, microcomputers, analog and digital private branch exchanges (PBX), ancillary equipment, such as disk drives, tape drives, plotters, printers, storage and back-up devices cable-connected to computers, digital imaging equipment, optical storage and/or retrieval equipment and office automation equipment that was designed for use in conjunction with or controlled by a computer system and telecommunications networks and related equipment, such as voice communications networks, data communication networks, local area networks, terminals, modems, data encryption devices, fiber optical and other communications networks, packet switching equipment, terrestrial carrier equipment, lightwave, microwave or satellite transmission and receiving equipment. This property will have a service life of two or more years and a unit cost of $25K or greater. This category does not include furniture, typewriters, copiers, calculators, microfilm/microfiche equipment.

(b) **Purchases <$25K:** Procurement for expendable equipment as defined above except for communications sees paragraph d below. This property normally has a service life of less than two years and has a unit cost of less than $25K. The cost of the property is expensed in the year of purchase.

2. **Lease**: Includes the cost as applicable to the related IT of rental/lease of computers and their peripheral equipment or office automation equipment. This category encompasses the cost for rental/lease of desktop and portable computers, memory, tape/disk drives, keyboards, monitors, various boards (e.g. coprocessor), etc. This excludes office copiers and data facsimile machines.

d. **Communications:** Obligations as applicable to the related AIS for the transmission of messages or data over all communication media, such as marine cable service, radio and wireless telegraph service, electronic data transmission service, telephone, telegraph and satellite service. Obligations as applicable to the related AIS for the purchase of: telecommunications equipment under $25K, telecommunications software under $25K, telecommunications equipment and software leases, telecommunications equipment and software maintenance and telecommunications supplies.

e. **Supplies**: Obligations purchasing IT supplies and materials such as system backup tapes, memory flash cards, large systems manuals etc. Costs for CD-ROM, diskettes, digital tapes, toner cartridges for laser printers and fax machines should be recorded in SUPMATRL. Excludes purchase of ADP software.

f. **Equipment Maintenance:** Obligations as applicable to the related **AIS** for the contract maintenance charges for ADPE. This includes computers (all sizes), peripherals, and other office automation.

g. **Software:** Any software, including firmware, specifically designed to make use of and extend the capabilities of Federal Information Processing (FIP) equipment.

1. **Purchase:** Investment made for the procurement of software as defined above.

(a) **Purchase >$25K:** Capital investment for software procurement (including one-time obligations for long-term licenses) or leases costing $25K or more for systems programs (e.g. control and library programs, assemblers, compilers, interpreters, utility programs; sort-merge programs, and maintenance-diagnostic programs); application programs and commercial-off-the-shelf (COTS) software (e.g., word processing, communications, graphics, file-management and database management system software). Software also includes independent subroutines, related groups of routines, sets or systems of programs; databases; and software documentation.

(b) **Purchase <$25K:** Procurement for expendable software as defined above. This software normally has a service life of two years or less and has a unit cost of less than $25K. The cost of the software is expensed in the year of purchase.

2. **Leases:** Obligations as applicable to the related AIS for one-time and/or recurring charges for the "use" of commercially available software. The emphasis is on usage not ownership i.e. the license for 20 "users" for one software package. The unit cost for this category is less than $25K.

h. **Computer Processing Services:** Obligations as applicable to the related AIS for CEAP or other platform processing charges. **Does not include CEAP Backbone Network charges.**

i. **Training**: Obligations as applicable to the related AIS for all automation training costs, tuition, regardless of training source, for all personnel. Includes the training needs during the development of the related AIS, as well as the deployment of the AIS.

j. **Other:** Obligations as applicable to the related IT for cost not readily identifiable as falling under any of the preceding or following cost categories.

k. **PRIP Pay Back:** Obligations as applicable to the related AIS for the reimbursement of the Revolving Fund for the purchase of software and hardware through the PRIP. These obligations include depreciation, plant increment and insurance. The reimbursement is made through a series of multiple payments proportionately made over the life of the asset. **These costs are not included in the life cycle management costs for the IT initiative**.

l. **Contract Support:** Obligations as applicable to the related AIS for advisory and assistance services acquired by contract from non-governmental sources to support or improve organization policy, management, and administration; support program and/or project management and administration; provide management and support services for R&D activities; and provide technical support services. These services may take the form of information, advice, opinions, alternatives, analysis, evaluations, recommendations, training, and technical support.

m. **Fee for Service:** Obligations recorded for the purpose of paying for the use of Command Standard Systems and is broken out between Site License and Metered systems. This Cost Category will only appear on IT initiatives that are classified under “Support to Command Standard Systems”.

X. The following are Standard Resource Codes for use in making IT related acquisitions:

a. **ITEQUIP**. Purchasing hardware/computers, peripherals, visual information equipment, office automation equipment and telecommunications equipment costing greater than the approved capital threshold for the appropriation funding the acquisition. OC 31.0

b. **ITEQUIPEXP.** (Old names ADPE and COMMEQUIP) Purchasing hardware/computers, peripherals, visual information equipment, office automation equipment, telephone equipment (like cell phones and pagers) and telecommunications equipment costing less than the approved capital threshold for the appropriation funding the acquisition. OC 31.0

c. **ITSFTWARE.** Purchasing custom and off-the-shelf software costing greater than the approved capital threshold for the appropriation funding the acquisition. OC 31.0 (eliminated $25,000)

d. **ITSFTWREXP**. (Old names ADDSOFT & ADPSOFT) Purchasing custom and off-the-shelf software costing less than the approved capital threshold for the appropriation funding the acquisition. OC 31.0 (eliminated $25,000)

e. **ITSUPPLIES**. (Old name ADPSUPL) Purchasing IT supplies and materials such as system backup tapes, memory flash cards, large systems manuals etc. Costs for CD-ROM, diskettes, digital tapes, toner cartridges for laser printers and fax machines should be recorded in SUPMATRL. Excludes purchase of ADP software. OC 26.0

f. **ITSFTDEVL**. Private sector contract costs for system software design, development, studies, analyses or evaluations. OC 25.1

g**. ITCONTSVS.** Contract services provided by private sector for IT technical support not otherwise classified. These services may take the form of information, advice, opinions, alternatives, analyses, evaluations, recommendations, training, and technical support. OC 25.1

h. **ITEQPMAINT.** (Old names ADPEMAINT, HARDMAINT & TELEMAINT) Contract costs for operation and maintenance of information technology hardware such as maintenance of PC hardware, local networks, routers, hubs, visual information, graphics, photo and telephone equipment. OC 25.7

i. **ITSFTMAINT**. (Old names SOFTMAINT & TELSFTMAIN0 Contract costs for operation and maintenance of information technology software. OC 25.7

y. **POSTALSVC**. Costs for postage (excluding parcel post and express mail service for freight) and contractual mail (including express mail service for letters) or messenger service; and rental of post office boxes, postage meter machines, mailing machines and teletype equipment. OC 23.3

k. **ITEQPLEASE.** (Old names ADPERENTAL & TELCOMRENT) Rental or lease of IT

technology equipment, includes any hardware or equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. OC 23.3

l. **ITSOFTLEAS.** (Old names TELESFTRNT & SOFTLIC) ADP and telecommunications software leases. OC 23.3

XI. The following are Standard IT Children Resource Codes that can be used optionally in lieu of one of the Standard IT Resource codes in paragraph IX above.

a. **ITOTHSVS**. Child of Standard Resource Code ITCONTSVS. Child code used for IT support by private contractor.

b. **ITFEDSPT**. Child of Standard Resource Code WKBOTHFED. Child code for IT support in Helpdesk, network or automation services received from GSA or other Federal contracts

c. **ITCOESPT**. Child of Standard Resource Code WKBOTHCOE. Child code to be used for IT Services received by other COE and tracking Gov't Orders in ITIPS.

d. **ITFEDMAINT.** . Child of Standard Resource Code WKBOTHFED. Child code used for IT maintenance support from other federal agencies.

e. **ITFEDSVS.** . Child of Standard Resource Code WKBOTHFED. Child code used for any other IT services from other federal agencies.